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Filing Date: June 19, 2001
Title: SYSTEM AND METHOD FOR AUTOMATIC AND ADAPTIVE USE OF ACTIVE NETWORK PERFORMANCE MEASUREMENT
    TECHNIQUES TO FIND THE FASTEST SOURCE
Assignee: Intel Corporation

IN THE CLAIMS

Please amend the claims as follows:

1.   (Currently Amended) A method for managing a plurality of sources comprising:

determining an empirical measurement of a performance of each of the plurality of

sources; ~~and~~

the determining including obtaining an empirical measurement of a throughput speed of

each of the plurality of sources from at least one third-party source; and

selecting a source in reference to the empirical measurements of the performance of each

of the plurality of sources and the at least one third-party source.

2.   (Cancelled)

3.   (Original) The method of claim 1, wherein the determining further comprises:

obtaining an empirical measurement of a throughput speed of each of the plurality of

sources from a local source.

4.   (Original) The method of claim 1, wherein the performance further comprises a

throughput speed.

5.   (Original) The method of claim 1, wherein the performance comprises latency.

6.   (Currently Amended) The method of claim 5, wherein the ~~measuring~~ determining the

empirical measurement further comprises:

measuring the elapsed time of a transmission involving each of the plurality of sources.

7.   (Currently Amended) The method of claim 5, wherein the ~~measuring~~ determining the

empirical measurement further comprises for each of the plurality of sources[[.]]:

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recording transmission time from the current time and date;

initiating a transmission to a download source of the plurality of sources;

receiving a response to the transmission from the source;

recording the receipt time from the current date and time; and

determining the throughput speed of the source from the difference between the receipt

time and the transmission time.

8.   (Currently Amended) A computer-accessible medium having executable instructions for managing a plurality of sources, said executable instructions capable of directing a processor to perform:

determining an empirical measurement of a throughput speed of each of the plurality of

sources; ~~and~~

<u>the determining including obtaining an empirical measurement of the throughput speed of</u>

<u>each of the plurality of sources from at least one third-party source; and</u>

selecting a source in reference to the empirical measurement<u>s</u> of the throughput speed of

each of the plurality of sources <u>and the at least one third-party source</u>.

9.   (Original) The medium of claim 8, wherein the throughput speed further comprises a download speed.

10.   (Original) The computer-readable medium of claim 8, wherein said instruction for determining further comprises an instruction capable of directing the processor to perform:

measuring a throughput speed of each of the plurality of sources.

11.   (Original) The medium of claim 10, wherein said instruction for measuring further comprises instructions capable of directing the processor to perform for each of the plurality of sources:

recording transmission time from the current time and date;

initiating a transmission to a download source of the plurality of sources;

receiving a response to the transmission from the source;

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recording the receipt time from the current date and time; and

determining the throughput speed of the source from the difference between the receipt

time and the transmission time.

12.   (Currently Amended) A computer data signal embodied in a carrier wave and

representing a sequence of instructions for managing a plurality of sources which, when executed

by a processor, cause the processor to perform the method of:

determining an empirical measurement of a download speed of each of the plurality of

sources; and

the determining including obtaining an empirical measurement of the download speed of

each of the plurality of sources from at least one third-party source; and

selecting a source in reference to the empirical measurement of the download speed of

each of the plurality of sources and the at least one third-party source.

13.   (Original) The computer data signal of claim 12, wherein the determining further

comprises for each of the plurality of sources:

recording transmission time from the current time and date;

initiating a transmission to a download source of the plurality of sources;

receiving a response to the transmission from the source;

recording the receipt time from the current date and time; and

determining the throughput speed of the source from the difference between the receipt

time and the transmission time.

14.   (Original) The computer data signal of claim 12, wherein the throughput speed further

comprises latency.

15.   (Currently Amended) A computerized method for managing a plurality of sources

comprising:

storing transmission time from the current time and date;

initiating a transmission to a download source of the plurality of sources;

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receiving a response to the transmission from the source;

storing the receipt time from the current date and time;

determining ~~the~~ a latency of the source from the difference between the receipt time <u>of</u>

<u>the response</u> and the transmission time <u>of the transmission</u>; and

selecting a source in reference to the latency ~~speed~~ of each of the plurality of sources.

16.   (Original) The computerized method of claim 15, wherein source further comprises a

source in a peer-to-peer network.

17.   (Original) The computerized method 15, wherein the:

the transmission further comprises a TCP/IP synchronized idle message; and

the response further comprises a TCP/IP acknowledgment message.

18.   (Currently Amended) A computer-accessible medium having executable instructions for

managing a plurality of sources, said executable instructions capable of directing a processor to

perform:

determining a plurality of round-trip timings of a packet transmission in conjunction with

each of a plurality of possible sources; ~~and~~

<u>the determining including obtaining an empirical measurement of the round-trip timings</u>

<u>of the packet transmission of each of the plurality of sources from at least one</u>

<u>third-party source; and</u>

selecting a source in reference to the plurality of round-trip timings <u>and the plurality of</u>

<u>round-trip timings of the at least one third-party source.</u>

19.   (Original) The medium of claim 18, wherein the source further comprises a source in a

peer-to-peer network.

20.   (Currently Amended) The medium of claim 18, wherein said instruction for determining

further comprises instructions capable of directing the processor to perform:

recording transmission time from the current time and date;

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initiating a transmission to a download source of the plurality of sources;

receiving a response to the transmission from the source;

recording the receipt time from the current date and time; and

determining the round-trip timing of the <u>download</u> source from the difference between

the receipt time <u>of the response</u> and the transmission time <u>of the transmission</u>.

21.   (Currently Amended) A computerized method for managing a plurality of sources
comprising:

obtaining a list comprising a plurality of identification of sources;

initiating a plurality of socket connections, the plurality of socket connections further

comprising one socket connection for each of the plurality of sources, yielding a

plurality of initiated socket connections;

<u>the initiating including obtaining an empirical measurement of a throughput speed of</u>

<u>each of the plurality of sources from at least one third-party source;</u>

receiving a response for the each of the plurality of initiated socket connections, yielding

a plurality of responses; and

selecting the fastest source of the plurality of sources in reference to a predetermined file

size and in reference to the <u>plurality of</u> responses <u>and to the plurality of sources</u>

<u>from the at least one third-party source</u>.

22.   (Original) The computerized method of claim 21, wherein the predetermined file size is
less than a predetermined threshold file size and wherein the selecting further comprises:

selecting the source associated with the response that is received first.

23.   (Original) The computerized method of claim 21, wherein the predetermined file size is
greater than a predetermined threshold file size and wherein the selecting further comprises:

measuring the latency of each of the plurality of sources; and

selecting a source in reference to the download speed of each of the plurality of sources.

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24.   (Currently Amended) The computerized method of claim 23, wherein measuring the
latency further comprises:

>   storing the time and date of each of the plurality of initiating socket connections;

>   storing the time and date of each of the plurality of responses; and

>   determining the download speed of each of the plurality of sources from the differences

>>   in time between the time and date of each of the plurality of the responses and the

>>   time and date of each of the plurality of the initiating socket connections.

25.   (Currently Amended) A system for managing sources in a peer-to-peer network
comprising:

>   a processor; and

>   software means operative on the processor for determining an empirical measurement of

>>   a throughput speed of each of the plurality of sources; and selecting a source in

>>   reference to the empirical measurement of the throughput speed of each of the

>>   plurality of sources. ;

>   the software means including obtainer means to obtain an empirical measurement of a

>>   throughput speed of each of the plurality of sources from at least one third-party

>>   source; and

>   the software means selecting a source in reference to the empirical measurements of the

>>   throughput speed of each of the plurality of sources and the at least one third-

>>   party source.

26.   (Original) The system of claim 25, wherein the throughput speed further comprises a
round-trip time.

27.   (Original) The system of claim 25, wherein the throughput speed further comprises a
latency.

28.   (Currently Amended) A computerized system comprising:

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a determiner of an empirical measurement of a throughput speed of each of the plurality

of download peer-to-peer network sources; ~~and~~

the determining including obtaining an empirical measurement of a throughput speed of

each of the plurality of sources from at least one third-party source; and

a selector of a source in reference to the empirical measurement of the throughput speed

of each of the plurality of peer-to-peer network sources and the at least one third-

party source.

29.   (Currently Amended) The computerized system of claim 28, the determiner further

comprising:

a transmitter ~~of~~ to transmit a message to a download source of the plurality of sources;

a recorder of the time of a transmission of a message, operably coupled to the transmitter;

a receiver of a response to the transmission from the source, operably coupled to the

transmitter;

a recorder of the time of receipt of a response; and

a determiner of the throughput speed of the source, from the difference between the

receipt time and the transmission time.

30.   (Original) The computerized system of claim 28, wherein the:

the message further comprises a TCP/IP synchronized idle message; and

the response further comprises a TCP/IP acknowledgment message.